them is troublesome, and the cure rather a cumbrous and clumsy one. Such, too, is the application of melted asphalte (although very effectual), or other bituminous substances, with the additional drawback of a strong, and to many a disagreeable, though it is believed an innoxious, and even wholesome odour. So excellent a damp-excluder has the pitchy, bituminous, or asphaltic, resin been found to be, however, not only from courts and areas paved with it, but from walls and roofs, that regret has often been expressed that the odour could not be subdued, in use for internal purposes. Of this we shall have something to say anon.

Pitch-papers may rank next in order, but are open to the objection just stated. These have been succeeded by the more recent papers rendered impervious by india-rubber or gutta-percha. A waterproof paper was also some time since invented by a M. Engle. It was prepared simply by plunging the unsized paper once or twice into a clear solution of mastic in oil of turpentine, and then drying gently by heat. The paper, without becoming transparent, is said to have, besides its power of resisting humidity, all the properties of writing paper, and to be specially adapted for workmen's books, passports, &c.,—resisting, moreover, the inroads of mildew, insects, mice, &c. A solution of india-rubber has been said to produce the like, and even better, effects on unsized paper. In this case, too, an objection, which we were just about to point out, as affecting all applications of water-proof papers to walls by means of paste, is obviated by the mixture of the mastic solution with the paste itself, rendering it thereby, in fact, also waterproof. Such a paste may redeem such papers from perhaps the only vital objection to their use with common paste, which it is worse than useless to lay on damp walls with impermeable papers, as these will, to a certainty, fall off in a much shorter time than even unprepared paper: better to nail sheets of thin paper lead, as some one recommends, or even these impermeable papers themselves, on the walls with nails of copper.

The last order of appliances now to be noticed are simply fluid paints of such a composition as will lie at once even on wet walls,—rapidly dry,—and form a tough and integrated waterproof superficial film, on a *body* penetrating and incorporating with the wall. It was doubtless with this intention that a recent patent was taken out for a fluid or solution, said to contain chiefly india-rubber and gutta-percha, and intended to be used either as, or mixed with, paint, as preparative to papering. At the time of its announcement, we suggested that probably a little boiled oil constituted the medium whereby the india-rubber and gutta-percha were rendered capable of mixture with paint, or of being used as paint itself. We have since tried such a composition, but although we found that india-rubber in solution, by help of a little heat, will mix completely with boiled or litharged oil and with gutta-percha solution, the composition does not possess the qualities requisite or desirable for ready and effectual application to damp or wet walls. A mere alcoholic solution of common resin, or other varnish, brushed upon a damp and even a very wet wall, we found to be far preferable. The wet was no obstacle to its fixture, and it rendered the wall-plaster not only perfectly dry on the surface, but much firmer in texture. The brittleness of resin alone, however, led us to think of a composition of far more fitting qualities in all respects, namely, a solution of resin, pitch, or asphalte, in oil of turpentine, with a quantity of india-rubber solution, or of gutta-percha solution, or of both, dissolved in the resinous solution. The amalgamation is a complete one, and the composition sticks to the wall like pitch itself. It is also remarkable, that when the composition is dry—and it dries very rapidly—not the slightest odour of pitch or bitumen remains. The volatility of its nature appears to be suppressed or fixed in the meshes of the india-rubber texture. To resin, however, even this temporary inconvenience does not apply. And if bleached resin be used, almost any colour, however delicate, may be mixed with it, and the whole used as paint. In papering, the composition itself may form the paste, and thus the paper may be applied almost simultaneously with the composition. A couple of coats, at least, however, are desirable; but these may follow one another at an interval of a very few hours. One great advantage of such a composition compared with some of the "mastics" and "cements," already treated of, is, that, being in a spirituous solution, it may be applied cold, and to a cold wall, with a common paint-brush; thus obviating the trouble and tedium of heating the walls with furnaces or irons, as well as of keeping the composition itself in a heated state.

THE CHARACTERISTICS OF PALLADIO'S ARCHITECTURE.*

THE peculiar characteristics of Palladio, which may be derived from the examination of his works and the perusal of his treatise, as a whole and in detail, are:—

An arrangement of plan, suitable to the customs and habits of the nobility of the Venetian territory, generally classically designed, and displaying great convenience and accommodation (according to the rank of his patron) by the disposal of the kitchen and other household offices, either in the house under the principal apartments, or outside, communicating with it by covered colonnades, open at one of the sides only. The disposition of the apartments is managed with great regard to their correspondence and proportion to each other, on each side of the vestibules and saloons (a matter not so observable in his contemporaries), and more particularly so in his designs for *irregular situations*; to give, as he says, "due solidity to the whole, that the roof should not press unequally upon the walls;" and occasionally some feature of use or decoration is introduced, to render the edifice more suitable to the purposes required.

An arrangement and decoration of the façade, pre-eminently adapted to the order selected and the class of the edifice, and conformable to the purpose of a town or a country-house, a basilica, or a church. Some of his most noble effects are obtained by the novel introduction and happy employment of two orders; the one, on a scale comprehending the entire height of the edifice; the other subordinate, comprehending about two-thirds of that height: in every case but that of S. Giorgio both orders rise from the same level, and in his grandest and noblest building, they are placed only on a small plinth, otherwise they are mounted on a high pedestal or stylobate. This principle of the double order had been employed by the ancients in the adjustment of side porticoes to the temples, as Palladio displays in his restorations of them: it was also used in the Propylæa at Athens; in which, the subordinate being 10, the principal is 15: amongst his own works in the Casa del Capitano, it is as 10 to 16½; the same in the Basilica: in the Casa Valmarana, as 10 to 20½. To this principle, says Mr. Cockerell, a great part of the secret of Palladio's magnificence may be attributed.

Another marked distinction in his designs from those of the preceding age, is the almost constant application of a pediment to the central part of the principal façade, and also to the ends of his colonnades, as a finish for the roof. "In *all* the houses," says he, "which I have built in the *country*, and also in *some* (very few) of those which I have made in *towns*, I have always placed a pediment where the chief entrance is, because it makes the principal entry to the house more conspicuous, and contributes very much to the magnificence and grandeur of the building. This gives the entrance façade a great advantage over the others, as it must for that reason be made higher: besides, it is much more proper to put the arms of the owner there, and they are generally placed in the middle of the pediment." The height is made to vary from one-fourth to one-sixth of the length of the horizontal cornice, and to depend inversely on the number of columns below it; a modification which renders the height nearly proportional to that of the building itself. At the Villa Pojana (as one example) we see a sad departure from ancient rules, in the want of the continuation of the horizontal cornice that should connect the lower extremities of the inclined mouldings,—a defect which has been too often followed by his copyists.

In the churches which Palladio erected, he seems to have made an effort to preserve the general form of the Basilican or Lombard churches, and to adapt the Roman orders to it, instead of returning to the first form of a Heathen temple. In the Lombard churches, the nave has considerable elevation, and the side aisles are subordinate to it. This form he retained, but he changed the façade with its tiers of arches for a single order of columns, either on a plinth or mounted on a high pedestal, and supporting an entablature with a pediment above. On the sides of the portico are the extremities of the aisles or chapels, with their inclined roofs ornamented by a half pediment on each side of the larger one: and though a better taste may condemn this appearance of a double pediment, there is, at least, a reason for employing it.

Palladio scarcely ever repeated himself in any of his numerous compositions: he had at his disposal all the means, all the combinations which the elementary parts of architecture could furnish, and he had the art of moulding them to his use, without ever exceeding the just medium which the art permits. His orders are elegant, and he did not scruple to vary the proportions of an order according to the nature of the building to which it was to be applied: he generally made the heights of his columns, when used in a particular story only, equal to the width of his principal rooms; a circumstance probably accidental, but which might have suggested itself from the rule established by Vitruvius in the case of a circular temple, for making the heights of the column equal to the width of the cell: Palladio adapted the Composite and Corinthian orders to enclose two stories of apartments. He was extremely partial to the use of the Ionic order, yet the others, particularly the Doric, were frequently employed by him: he occasionally made use of inosculating columns, a practice not to be recommended for adoption. If the front of the house in which Palladio lived be truly of his own design, he committed a great error in giving the Tuscan base to both the Ionic and Corinthian orders employed therein: it is true that it is used, at the Coliseum, in the Corinthian order, but in so immense an edifice, a small part being irregular is perhaps not of much consequence, as, from the elevated and combined situation, it appears no more than a speck; but where it is brought so much nearer the eye, as in a private dwelling, any irregularity must certainly be considered as a violation of the rules of architecture.

Palladio occasionally used insulated pilasters, and Inigo Jones rendered them much more familiar to us. Palladio left the columns and pilasters plain when used at the ends of porticoes, and most of the school have followed his example: he was generally particular in applying a single order to each story it was intended to decorate, though in large buildings he had no objection to introduce, at the angles, a tier of mezzanine windows, occupying perhaps four stories in height: the larger orders he retained for his entrance halls and courts, with small pilasters behind them to carry the floor of the gallery. His favourite display of the orders seems to be the Doric and Ionic: then the Ionic: and, thirdly, Ionic and Corinthian. Of the first, the Chiericato Palace affords a good example: the second appears mostly in the porticos to the country houses: the third is shown in the house of Udine. He also used the Ionic alone with good effect on a rustic basement: and in the same way, the Corinthian. The upper orders are sometimes placed on pedestals and sometimes not, and the pedestals are as often found without plinths; both arrangements seeming to depend upon the position of the windows and the height of the story. The lower columns were placed upon plinths or surbasements; the *larger* orders generally upon pedestals, to give additional height to them. These peculiarities of manner are only observable in the works themselves, for he has not left any directions concerning the composition or *design* of edifices,—the only glory of the architect: decorations, however they may affect the less educated, are least regarded by the judicious eye. In windows having columns for part of their enrichments, he generally used the order ranking under that employed as principal.

All these peculiarities are seen in the school, but after the time of Jones the lesser orders were not so generally adopted, but the larger

* Part of a paper by Mr. Wyatt Papworth, "On the Peculiar Characteristics of the Palladian School of Architecture," read at Institute of Architects.

For info on OCR and PDF Compression visit our website